



Graft copolymers of methylene lactones and process for emulsion polymerization of methylene lactones

Description of Technology: The invention relates to the field of microbiology. More specifically, vectors are provided for the cloning and expression of genes in *Rhodococcus* species and like organisms.

Patent Listing:

1. **US Patent No. 6,949,362**, Issued September 27, 2005, "Rhodococcus cloning and expression vectors"

<http://patft.uspto.gov/netacgi/nph-Parser?Sect2=PTO1&Sect2=HITOFF&p=1&u=%2Fnetacgi%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&d=PALL&RefSrch=yes&Query=PN%2F6949362>

Market Potential: Gram-positive bacteria belonging to the genus *Rhodococcus*, some of which were formerly classified as *Nocardia*, *Mycobacterium*, *Gordona*, or *Jensenia* spp., or as members of the "rhodochrous" complex, are widely distributed in the environment. Members of the genus *Rhodococcus* exhibit a wide range of metabolic activities, including antibiotic and amino acid production, biosurfactant production, and biodegradation and biotransformation of a large variety of organic and xenobiotic compounds (see Vogt Singer and Finnerty, 1988, *J. Bacteriol.*, 170:638-645; Quan and Dabbs, 1993, *Plasmid*, 29: 74-79; Warhurst and Fewson, 1994, *Crit. Rev. Biotechnol.*, 14:29-73). Unfortunately, few appropriate genetic tools exist to investigate and exploit these metabolic activities in *Rhodococcus* and like organisms (see Finnerty, 1992, *Annu. Rev. Microbiol.*, 46:193-218).

The problem to be solved, therefore, is to provide additional useful plasmid and shuttle vectors for use in genetically engineering *Rhodococcus* and like organisms. Such a vector will need to have a robust replication protein and must be able to be stably maintained in the host.

Benefits:

- Provides plasmid and shuttle vectors
- Vectors possess robust replication protein
- Vectors are able to be stably maintained in the host

Applications:

- Microbiology

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